

The economic and environmental impact of this transpired solar wall is quite impressive. When FedEx needed to provide 90,000 cfm of ventilation air to its COLORADO building, it chose to use the transpired solar wall, saving \$7,000 and reducing carbon dioxide emissions by 254,000 pounds per year.



Solar energy absorbed by the dark, south-facing solar wall provides heated ventilation to this lumber warehouse located in the Rocky Mountains.

### For more information:



Visit the Department of Energy's Energy Efficiency and Renewable Energy website at: www.eren.doe.gov

Call or email the Energy Efficiency and Renewable Energy Clearinghouse at: 1.800.363.3732 doe.erec@nciinc.com



NREL/BR-710-30176

### In your area, contact:

# Transpired Solar Walls



## Transpired Solar Walls

Transpired solar walls are remarkably simple, yet effective, energy sources available for certain commercial building applications. Outside air passes through a south-facing, perforated, solar collector wall and is pre-heated 30 to 55 degrees on sunny days before entering the building's ventilation system.

Photo courtesy of Warren Gretz, NREL



An army helicopter waits for maintenance outside the hangar in COLORADO. The transpired solar collectors help heat the 7,800 square foot building as well as improve indoor air quality degraded by fumes from helicopter fuel.



Clean Energy for the 21st Century

# Transpired Solar Walls

Transpired Solar Walls

The Right Choice for Business

"We wanted to provide a comfortable environment for our employees and customers in our new 22,000 square foot drive-through lumber and building center warehouse, so we installed a solar wall on 100 feet of our south-facing wall. The solar wall was relatively inexpensive and is now our primary heating source for the warehouse."

> — Don Sather, Owner, Big Horne Materials, Silverthorne, CO



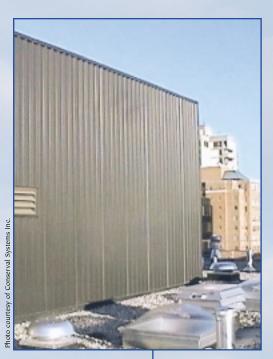
view" shows the transpired solar wall that provides ventilation and heating for Interface, Inc.'s carpet tile manufacturing plant warehouse

in NORTH CAROLINA.

### Photo courtesy of Conserval Systems Inc



This K-12 school located in downtown Minneapolis, MINNESOTA uses over 2,000 square feet of transpired solar wall to ensure high quality indoor air while reducing heating costs.



Residents of this new, luxury 65-unit apartment building in Cambridge, MASSACHUSETTS, enjoy solar heated fresh air. The building owner was entitled to a 10% investment tax credit and 5.5 year accelerated depreciation credit plus large energy savings each month.

# Cost Effective Energy.

By pre-heating cold outdoor air with solar energy, transpired wall collectors remove a substantial load from a building's conventional heating system, reducing maintenance, saving energy and money. Using free and renewable energy from the sun is the wise choice for your business. To reduce capital costs, the system may qualify for a 10% federal investment tax credit.

Solar transpired wall collectors improve indoor air quality in many commercial buildings such as manufacturing plants, vehicle maintenance facilities, gymnasiums, aircraft hangars, schools and warehouses.

## Attractive. tive

The transpired collector can improve a building's appearance, giving the south-facing side a neat, clean, uniform look. Many color options coordinate with building materials and finishes.

# clean Energy 1ergy

Solar heated transpired wall systems use clean, non-polluting energy from the sun. It is safe for our environment, safe for plants and animals and safe for all of us. Make the responsible choice for your business.